

REVISED TO INCLUDE  
LEAF OFF PHOTOS  
11/19/2020

# Ulster County Public Safety Radio Tower

35 Quarry Road  
Saugerties, NY



# Approval Process

**NEED**

**ENVIRONMENT**

**DESIGN**

**BUILD**

# Project Need

## Problem

Existing radio system is analog (rebroadcast)  
Not suited for county-wide communication

## Solution

Move to simulcast system  
covers a wider geographic area with broadcasts  
from multiple transmitter sites and is frequency  
efficient

## Problem

Critical Coverage Gaps

## Solution

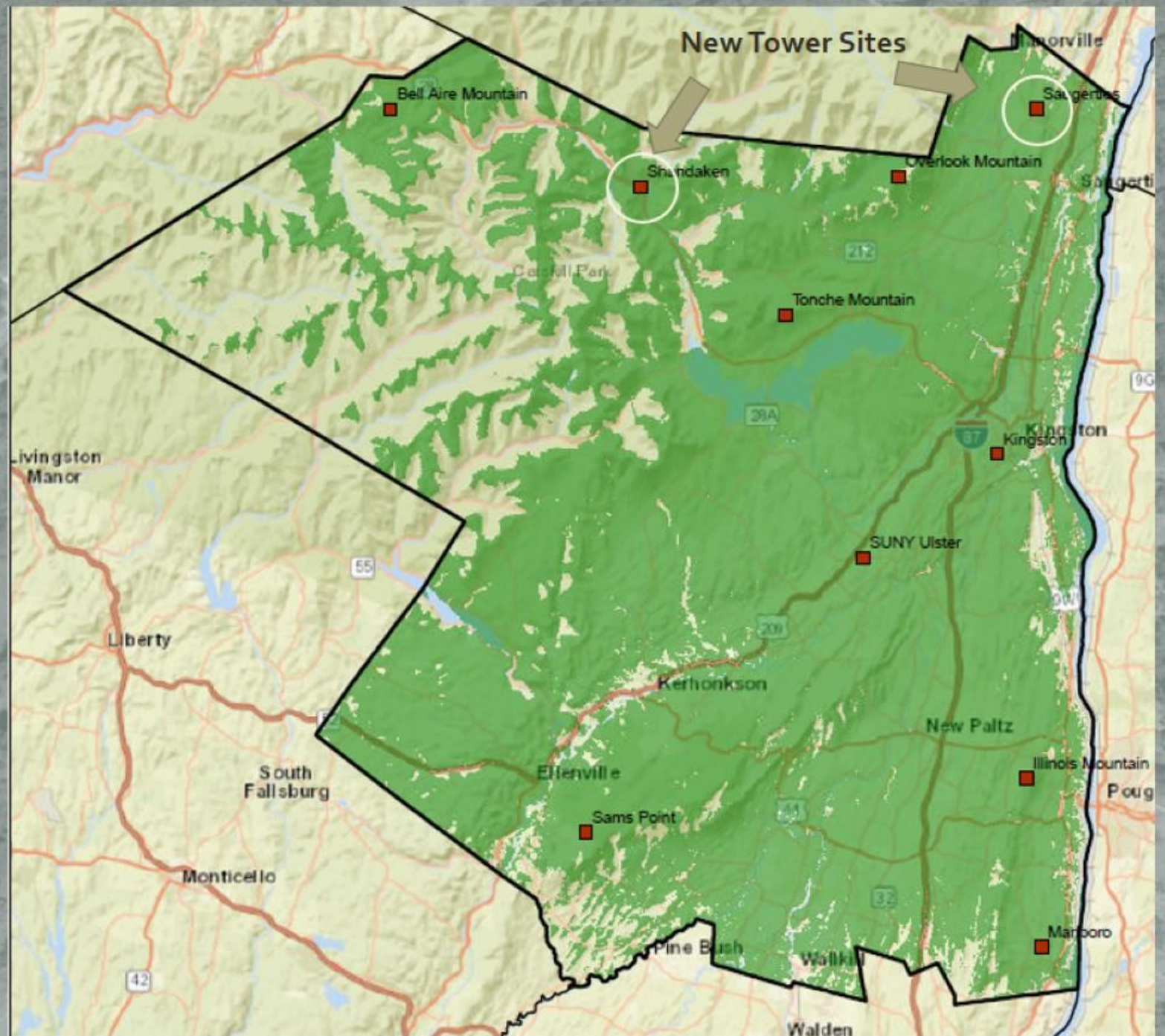
Close Coverage gaps with additional towers and  
create backhaul redundancy



# Project Need Coverage Analysis

VHF Simulcast  
Portable  
Outbound  
95% Coverage

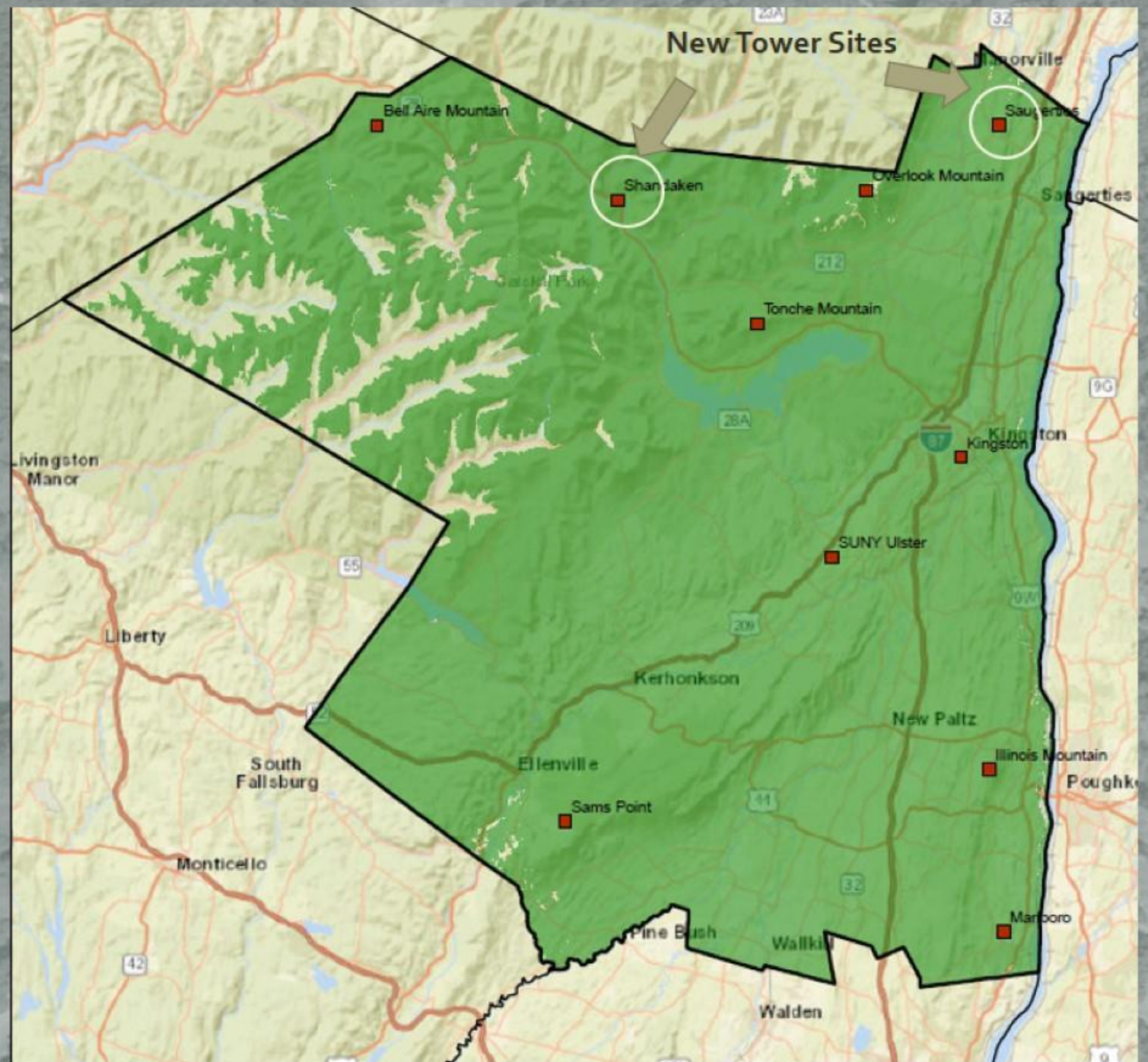
With new tower sites



# Project Need Coverage Analysis

VHF Simulcast  
Mobile  
Outbound  
95% Coverage

With new tower sites

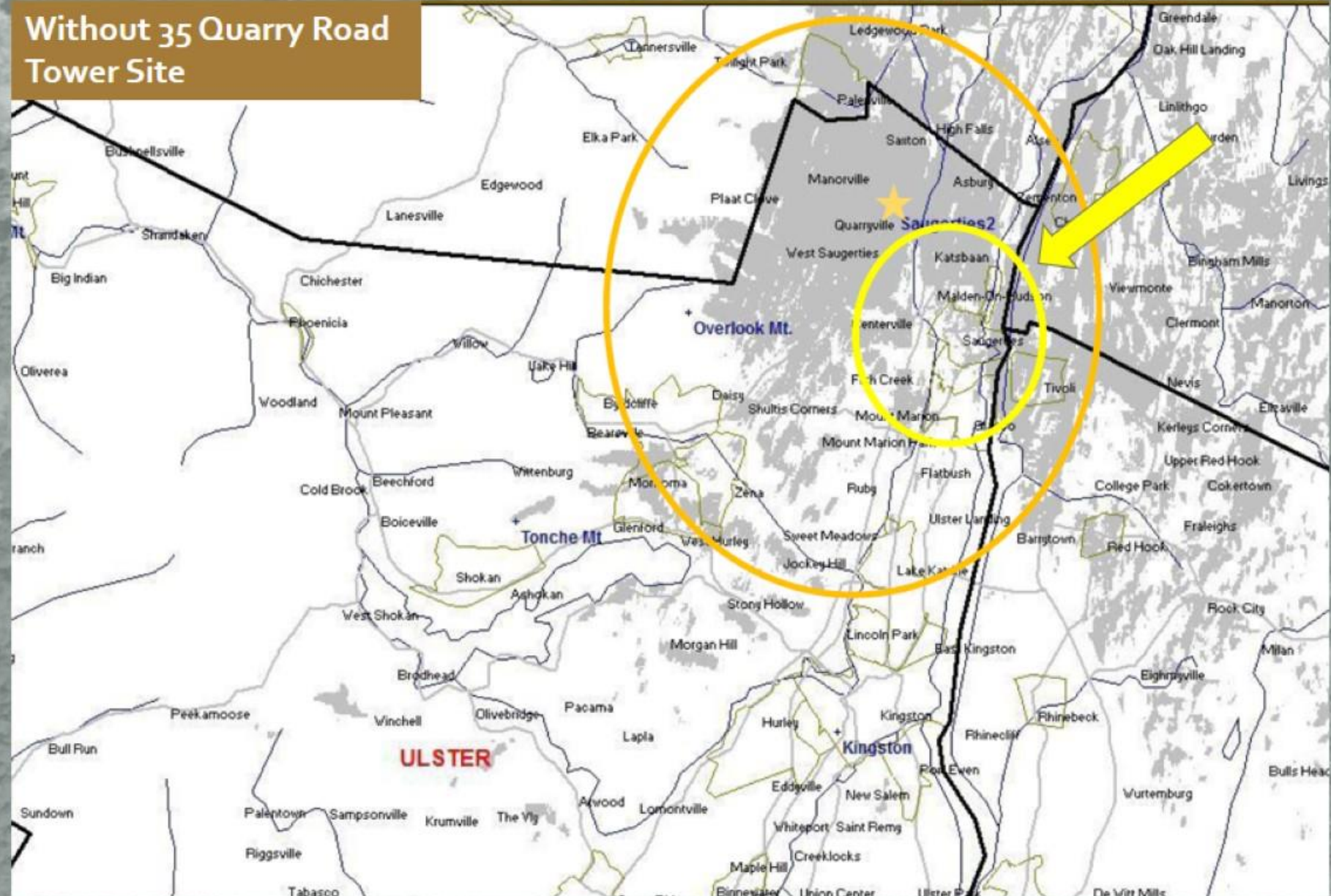


# Project Need Coverage Analysis

## Problem

Critical coverage gap with VHF simulcast in the Saugerties area without a new tower (note Village)

Without 35 Quarry Road Tower Site



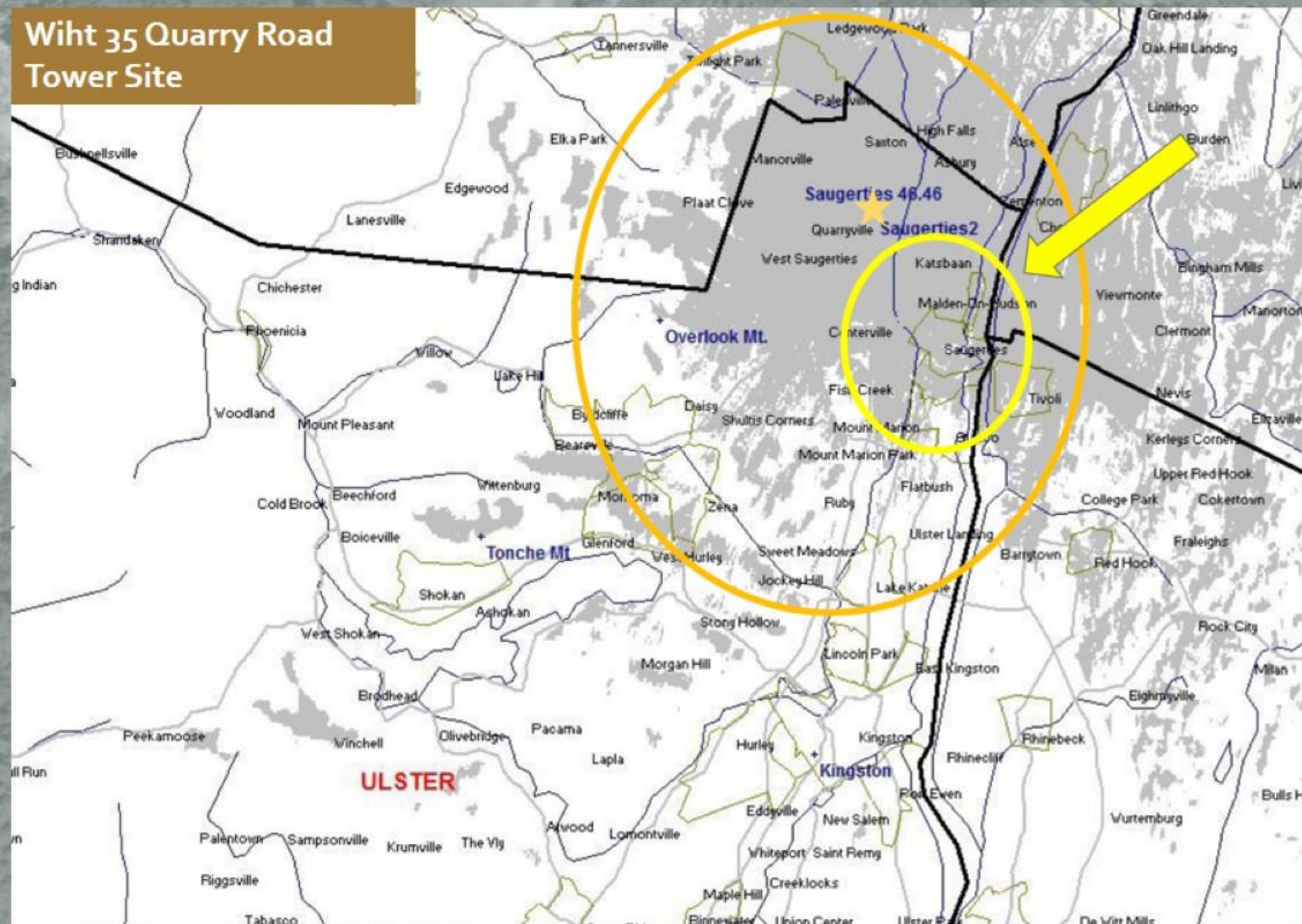
## With 35 Quarry Road Tower Site

# Project Need Coverage Analysis

## Solution

Close gap with additional  
tower in the Saugerties Area  
(note improved coverage in  
Village and Rt. 32 Corridor)

With 35 Quarry Road



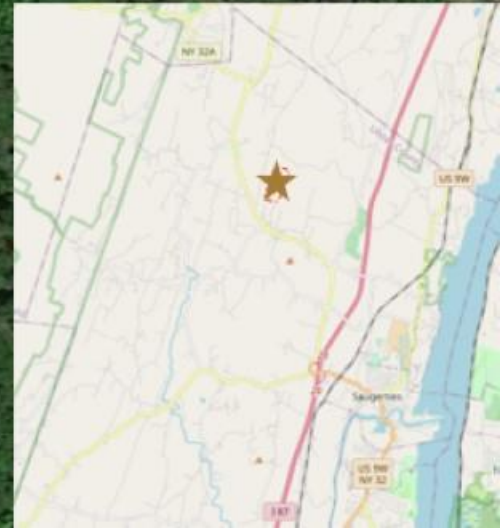
# Proposed Saugerties Tower Site

35 Quarry Road  
proposed 180 ft. tall

Existing County owned  
site

Former tire dump

New Tower Site





## **Environment**

SEQRA Short EAF  
Viewshed Analysis  
Photo Simulations  
Historic and Archeological  
Report

## **Design**

Site Plan  
Geotechnical Analysis  
Structural Tower Needs

Proposed  
Tower Site  
35 Quarry Road

Current  
Studies

# Viewshed Analysis

- Site Context – Distances to adjoining structures



## Viewshed Analysis

- Site Context –

The tower site sits in a bowl surrounded by higher elevations on all sides except to the south. These ridges and vegetation provide effective screening for the tower's lower sections and in many instances will block views completely during leaf on

The site surrounding site character is low density residential with mixed commercial and highway businesses

# Viewshed Analysis based on topographic data



Area of potential tower visibility



Historic Properties<sup>1</sup>



Other Historic Resources<sup>2</sup>



Proposed Tower Site

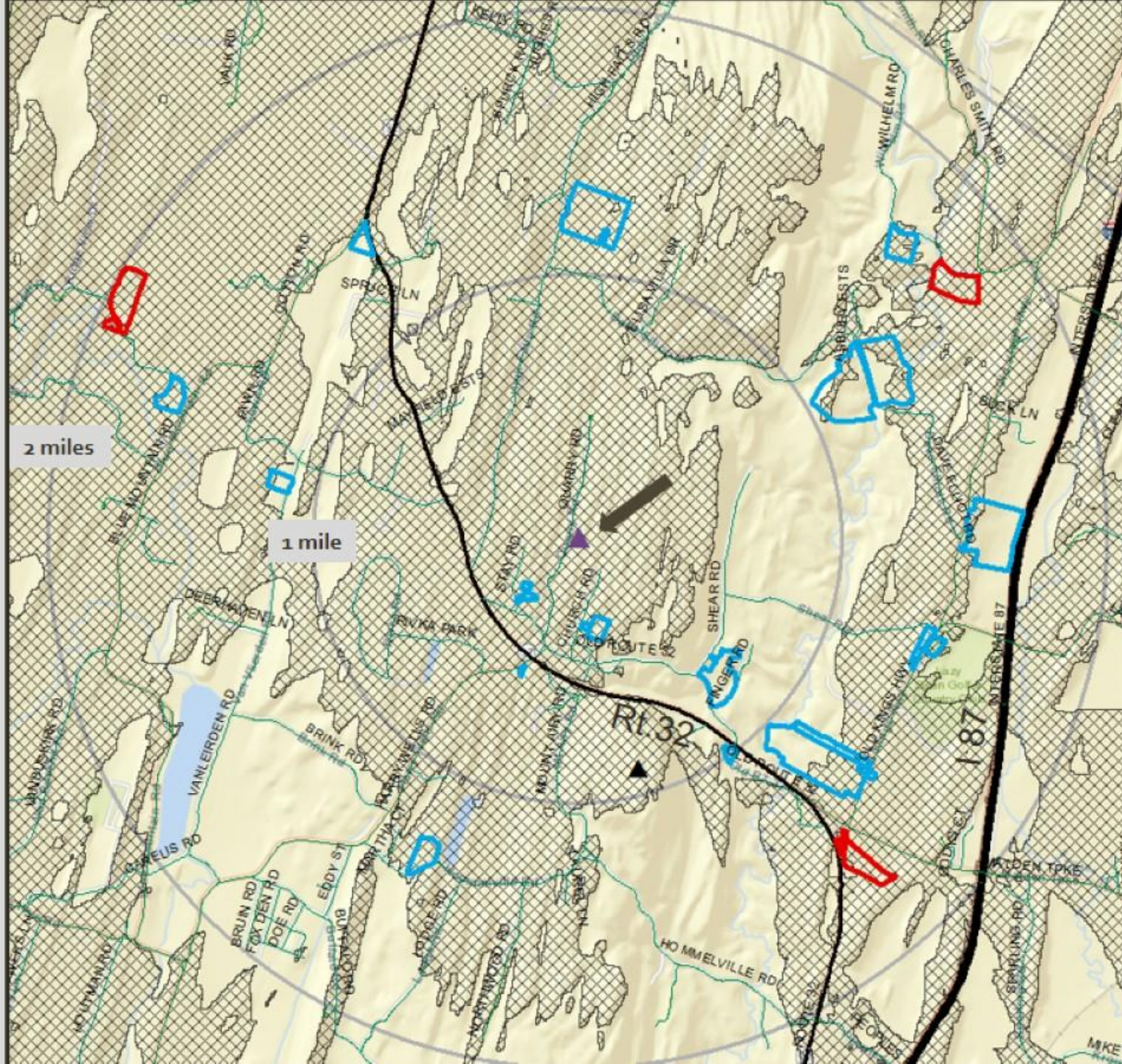


Existing Towers



Circles represent 1 mile increments

1. Eligible for listing on the Historic Register
2. Identified in 2005 Saugerties Report



# Viewshed Analysis

based on 40' tree height

Proposed 180-ft Self-Support Tower  
35 Quarry Rd, Saugerties, New York  
Site Name: Quarry Road 911 Site

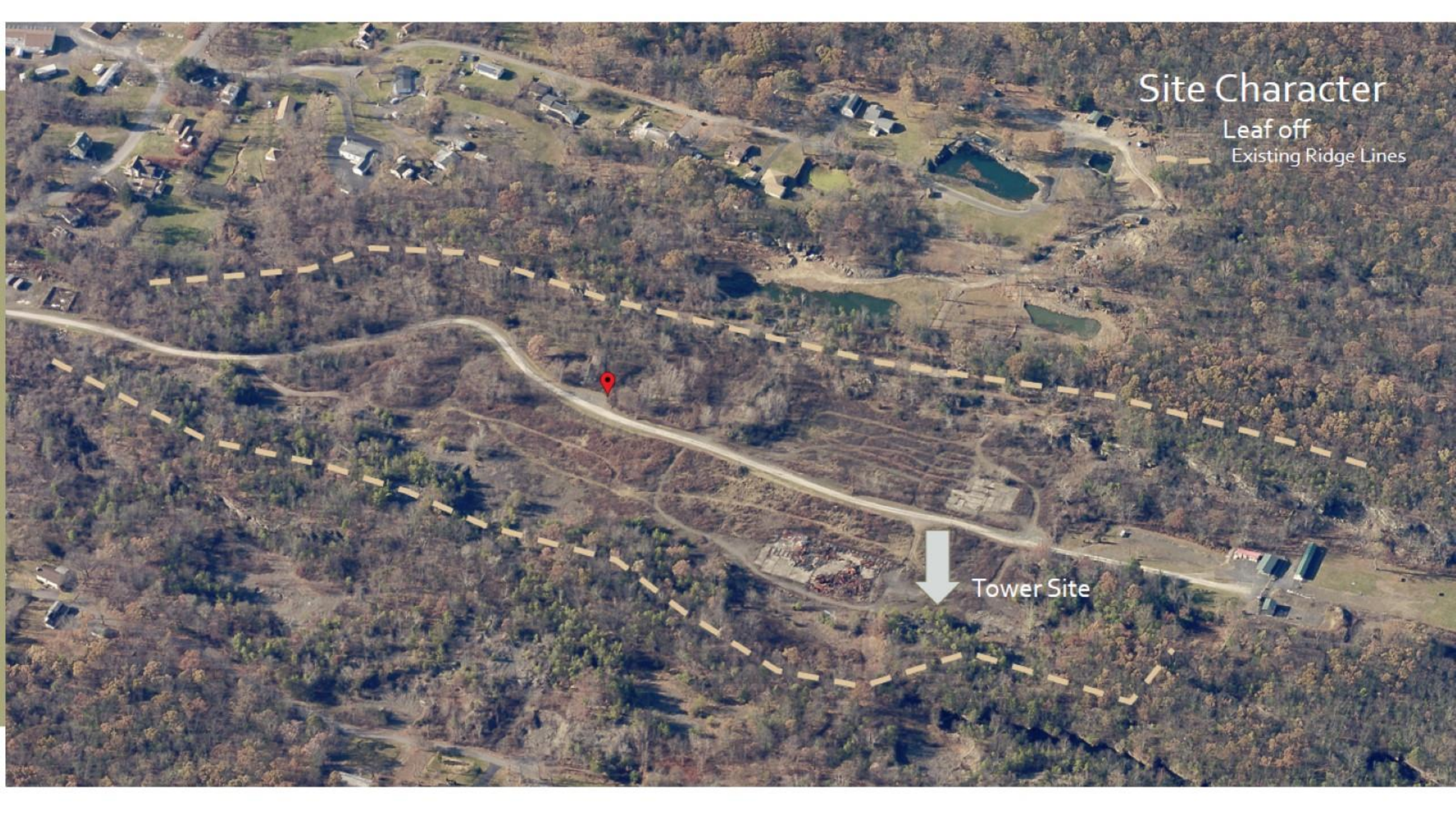
Zone of Visibility Map  
June 2020

- Proposed Self-Support Tower
- Proposed Self-Support Tower Visible  
Based on Topography with Adjustment for Screening  
by Trees at 40-ft.



# Site Character

Leaf off  
Existing Ridge Lines



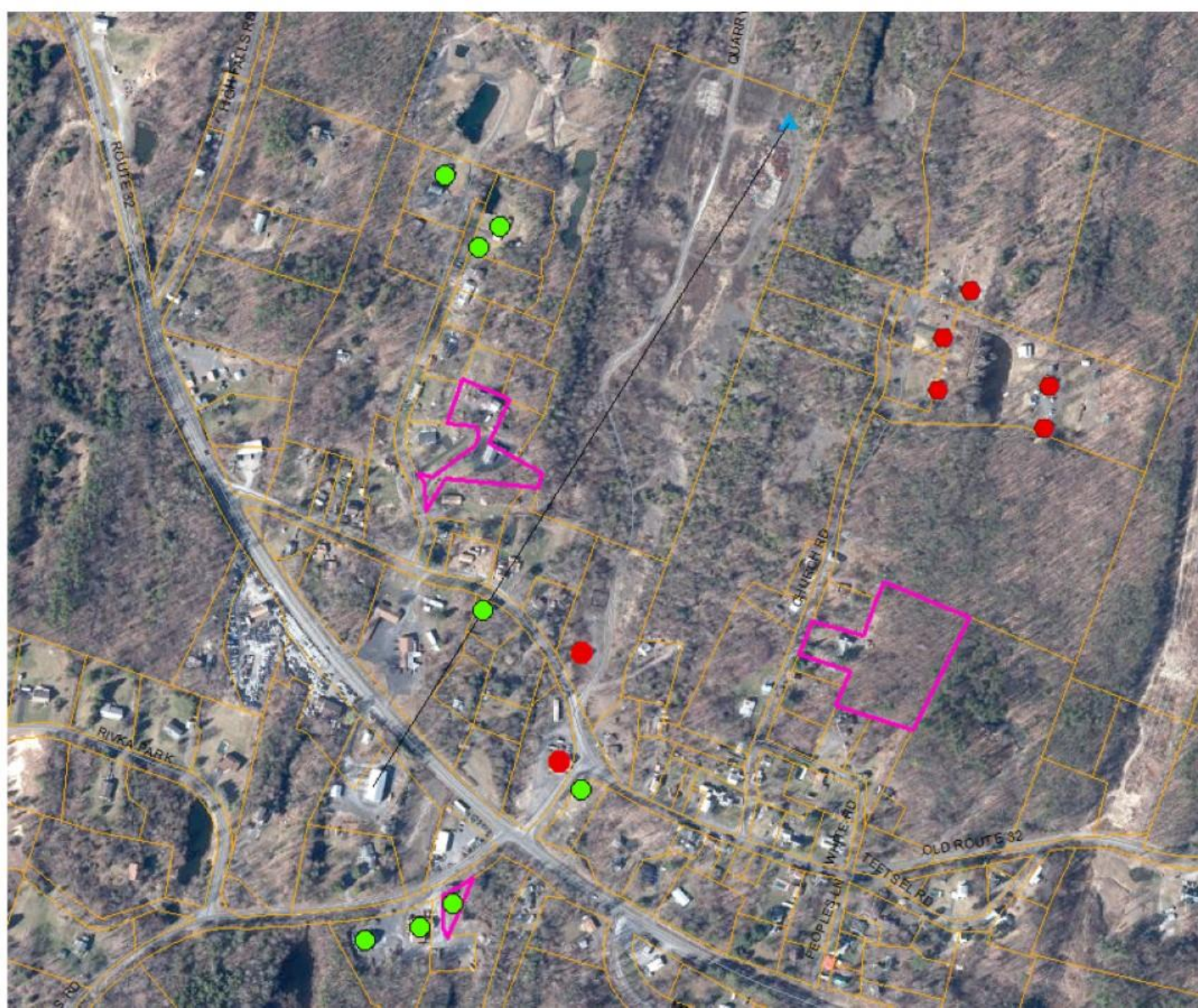
## Overview of Tower Visibility

Note:

Red Dots represents  
properties where the  
tower is visible both  
leaf on and leaf off

Green dots represent  
areas where the tower  
is only visible during  
leaf off conditions

Purple outlined areas  
are historic sites  
included in Saugerties  
Inventory



Date 11/6/2020  
View Direction  
South at 180°

Note:  
Area of visibility at  
entrance to the site  
Photo simulations  
done at these  
locations



Date 11/17/2020

View Direction

South at 180°

Note:

Area of visibility at  
entrance to the site

Photo simulations  
done at these  
locations

Additional visibility  
across Rt. 32 at Harry  
Wells Rd.

No visibility at  
beginning of Church  
Street



Date 11/6/2020  
View Direction  
Southwest at 180'



Date: 11/17/2020  
View Direction  
Southwest at 180'

Note: no visibility of  
Quarryville Methodist  
Church



Date:  
11/6/2020 View  
Direction  
West at 180'  
Note: Resident Rooftop



Date: 11/17/2020

View Direction

West at 180'

Note: Residences  
partially visible along  
Stay Rd.



Date 11/6/2020  
View Direction  
Northwest at 180'



Date 11/17/2020  
View Direction  
Northwest at 180'

Note: Residences  
partially visible



Date:11/6/2020  
View Direction  
North at 180'



Date: 11/17/2020  
View Direction  
North at 180°

Note: Single  
residence view at  
approx. 4,500 ft.



Date: 11/6/2020  
View Direction  
Northeast at 180'



DATE: 11/17/2020

View Direction

Northeast at 180'

Note: Top of Central  
Hudson Transmission  
Towers at  
approx 2,200 ft



Date: 11/6/2020  
View Direction  
Southeast at 180'



Date: 11/17/2020  
View Direction  
Southeast at 180'



Date: 11/6/2020  
View Direction  
Southeast at 180'

Zoom of Visible  
Residences



Date: 11/17/2020  
View Direction  
Southeast at 180'

Zoom of visible  
residence along  
Church Rd.



Date: 11/6/2020  
View Direction  
Southeast at 180'



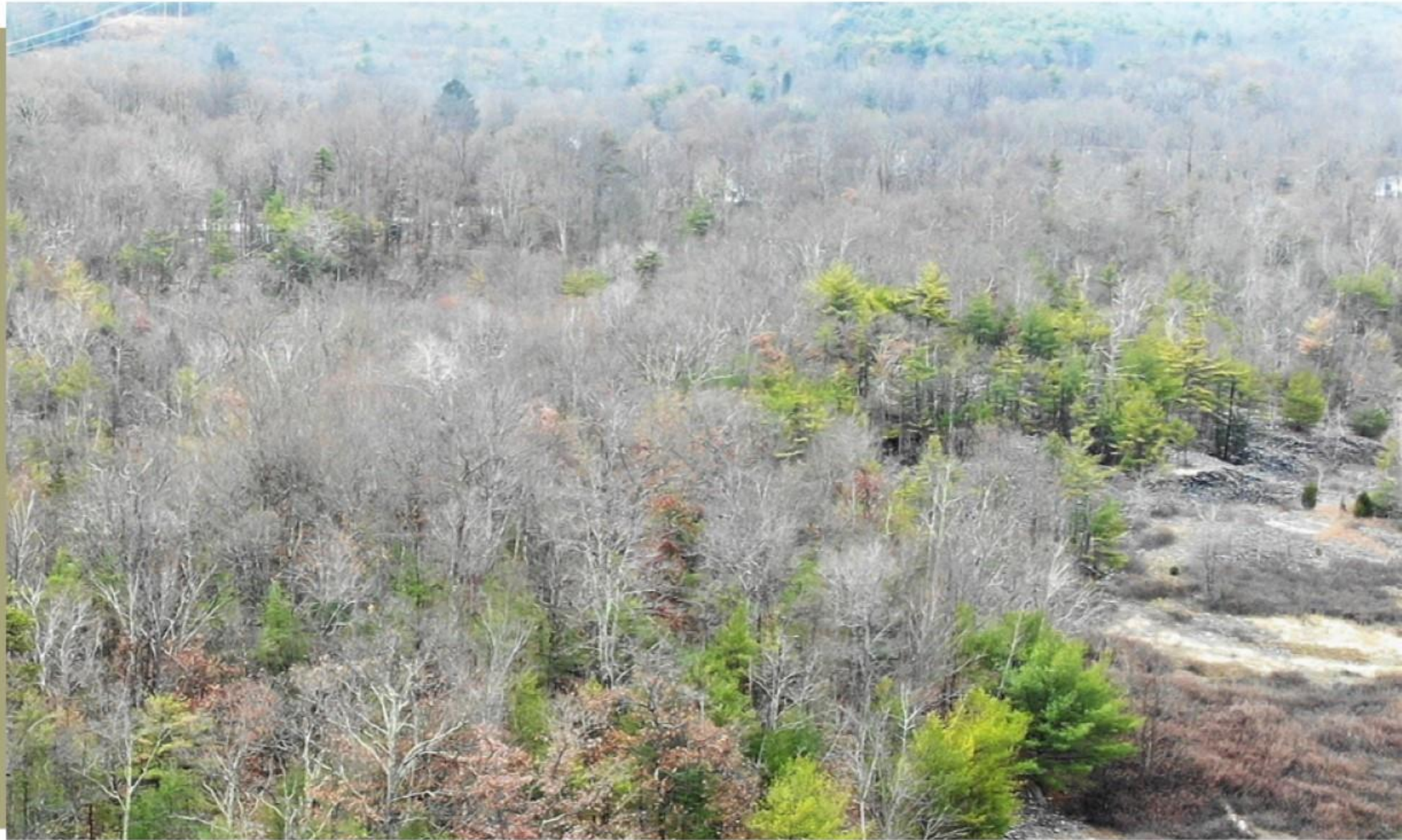
Date: 11/17/2020  
View Direction  
Southeast at 180'

Note: Residences not  
visible at the  
beginning of Church  
St.



Date: 11/17/2020  
View Direction  
Southeast at 180'

Zoom of Church Street



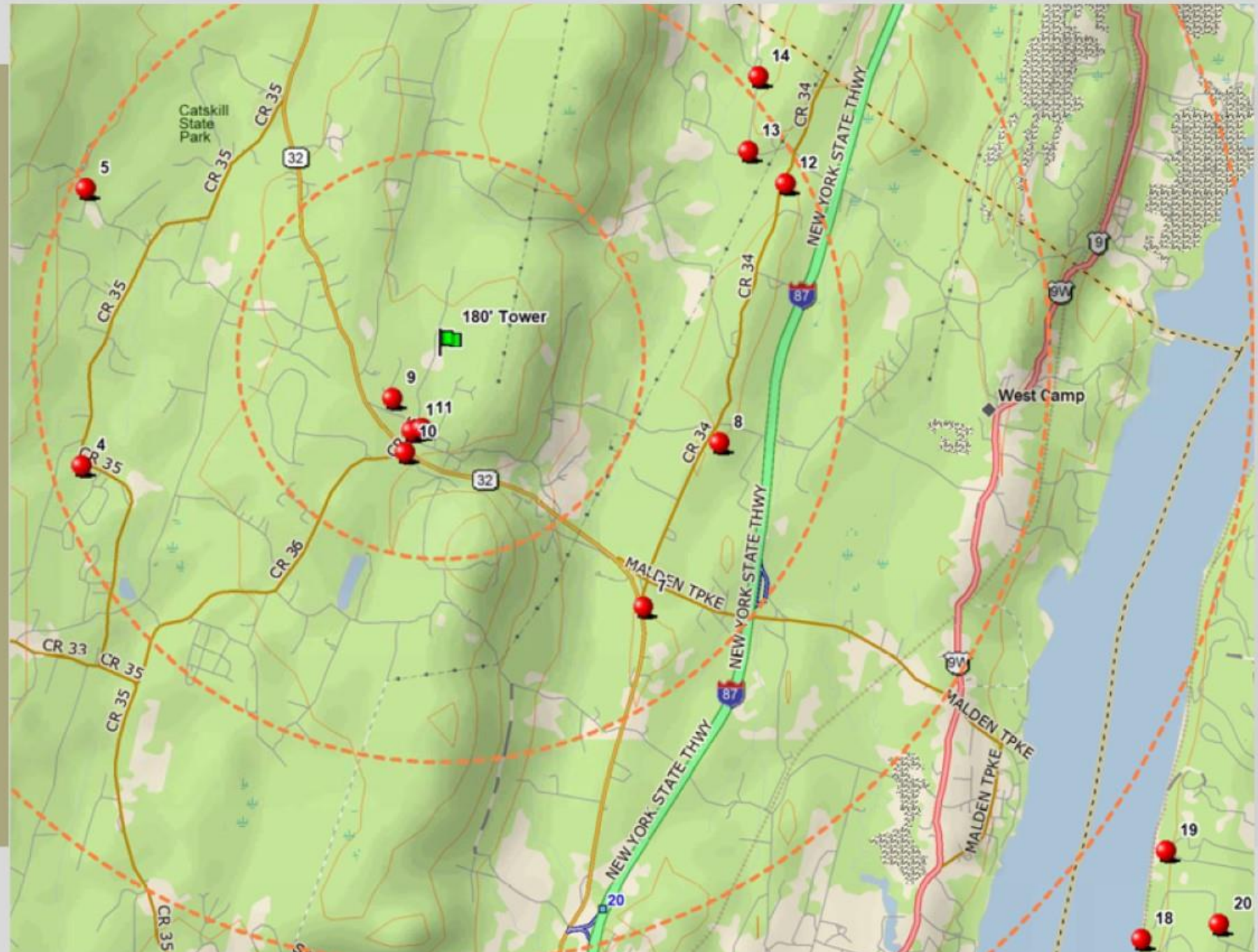
VIEW SOUTH at 130'

Area of photo simulations



# Viewshed Analysis

- Identified locations in coordination with Planning Board and in accordance with **NYSDEC guidelines** includes sensitive sites and road views
- Balloon test conducted on July 18, 2020
- Only 2 locations of potential visibility of the sites chosen both close to the access road to the site



# Photo Simulation

- Photo # 10 located at the north intersection of Harry Well Road and NYS Rt. 32
- This is a 4 way offset intersection
- The Tower site is approximately 2,600 ft. from the location of the photo

Balloon Location



# Photo Simulation

- Approx. 2/3 of the Tower is visible from this location
- Visibility from NYS Rt 32 is limited to quick passing views given the angle of the views.
- The approach views are blocked by vegetation.
- The view from the intersection of Harry Wells Road west side intersection with Rt 32 is similar to the one shown..

Tower @180' with  
EMS antennae



2020.07.18

# Photo Simulation

- Photo # 1 located at the entrance to Quarry Road.
- This is also the site entrance and serves the
- County owned property, a sports mans club, a single family residence, and a vacant property
- Photo taken on July 18<sup>th</sup>
- The tower site is approximately 1,900 ft. From the location of the photo

Balloon Location



# Photo Simulation

- Approximately  $\frac{1}{2}$  of the tower is visible from this location
- The visibility from old Rt. 32 is similar with more of the tower blocked by buildings and vegetation
- In each case visibility is brief for road users given the angle of the views.

Tower @180' with  
EMS antennae



# Photo Simulation

- Approximately 2/3 of the tower is visible from this location
- The picture is taken from the end of Church Rd. The location is approx 20 ft. lower than the houses along this Rd.

Tower @180' with  
EMS antennae



# Viewshed Analysis

## Site Context

- Quarryville United Methodist Church
- 1,450 ft. away

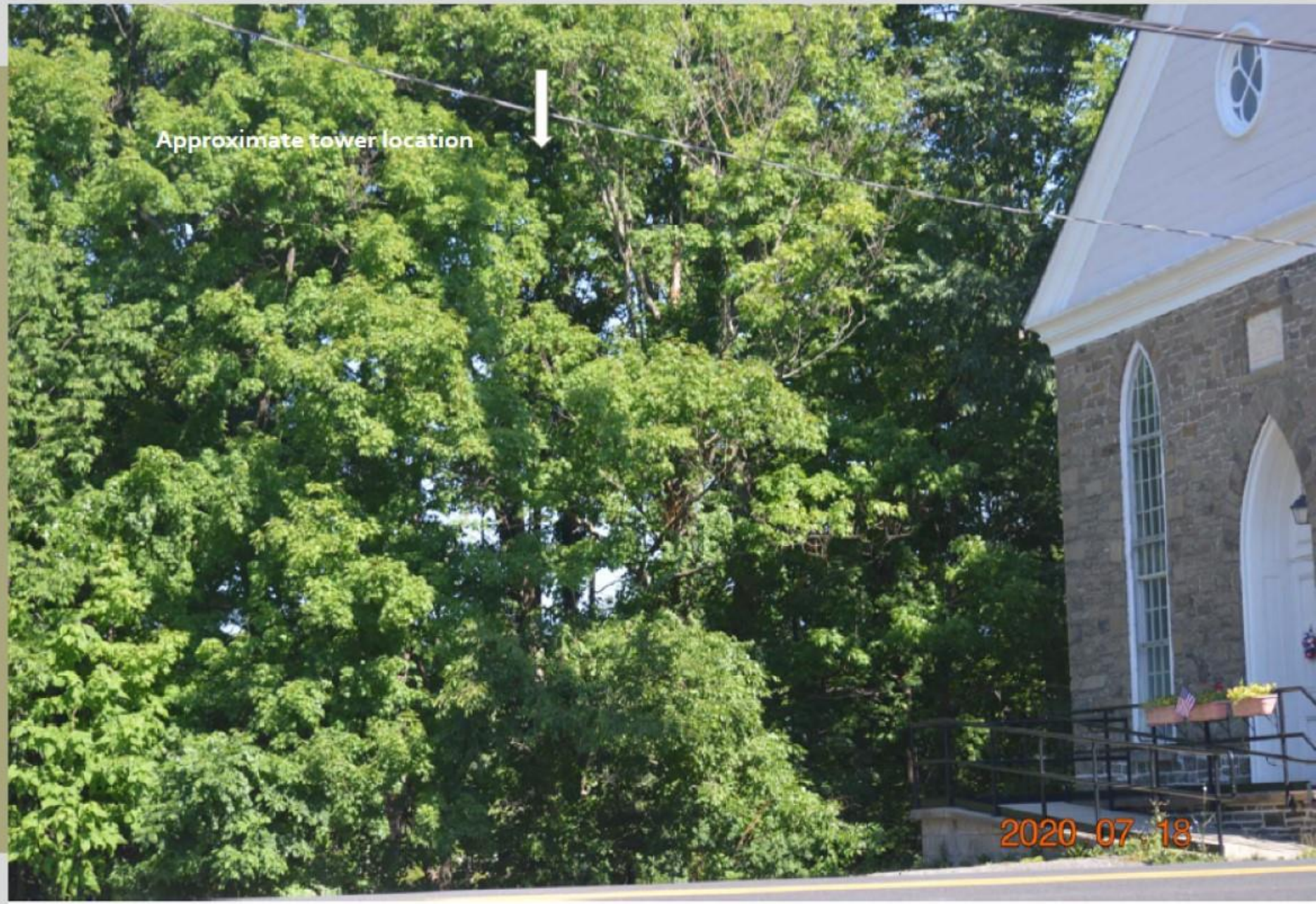


2020 07 18

# Viewshed Analysis

## Site Context

- Katsbaan Reformed Church
- 1.3 miles away



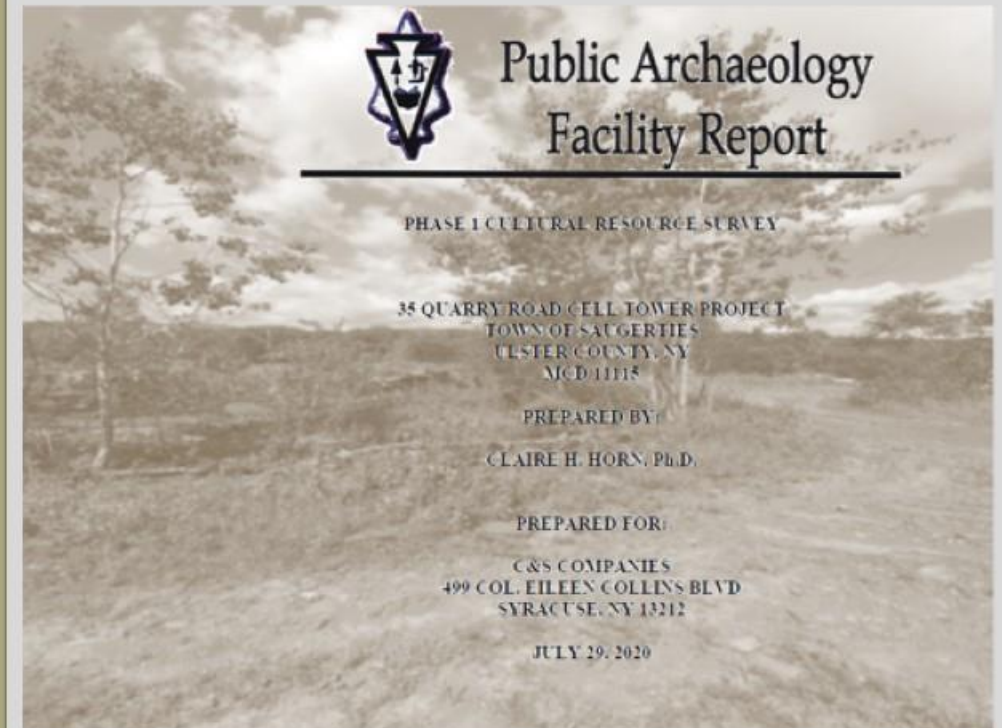
# SEQRA & NEPA

## Historic and Cultural Resources

- No evidence of archeological sites or standing historic structures
- No National Register Listed or Eligible properties within 0.05 miles
- Recommendation
- The proposed project will not have a significant impact.
- SHPO has concurred.
- THPO coordination on going

## Other State and Federal

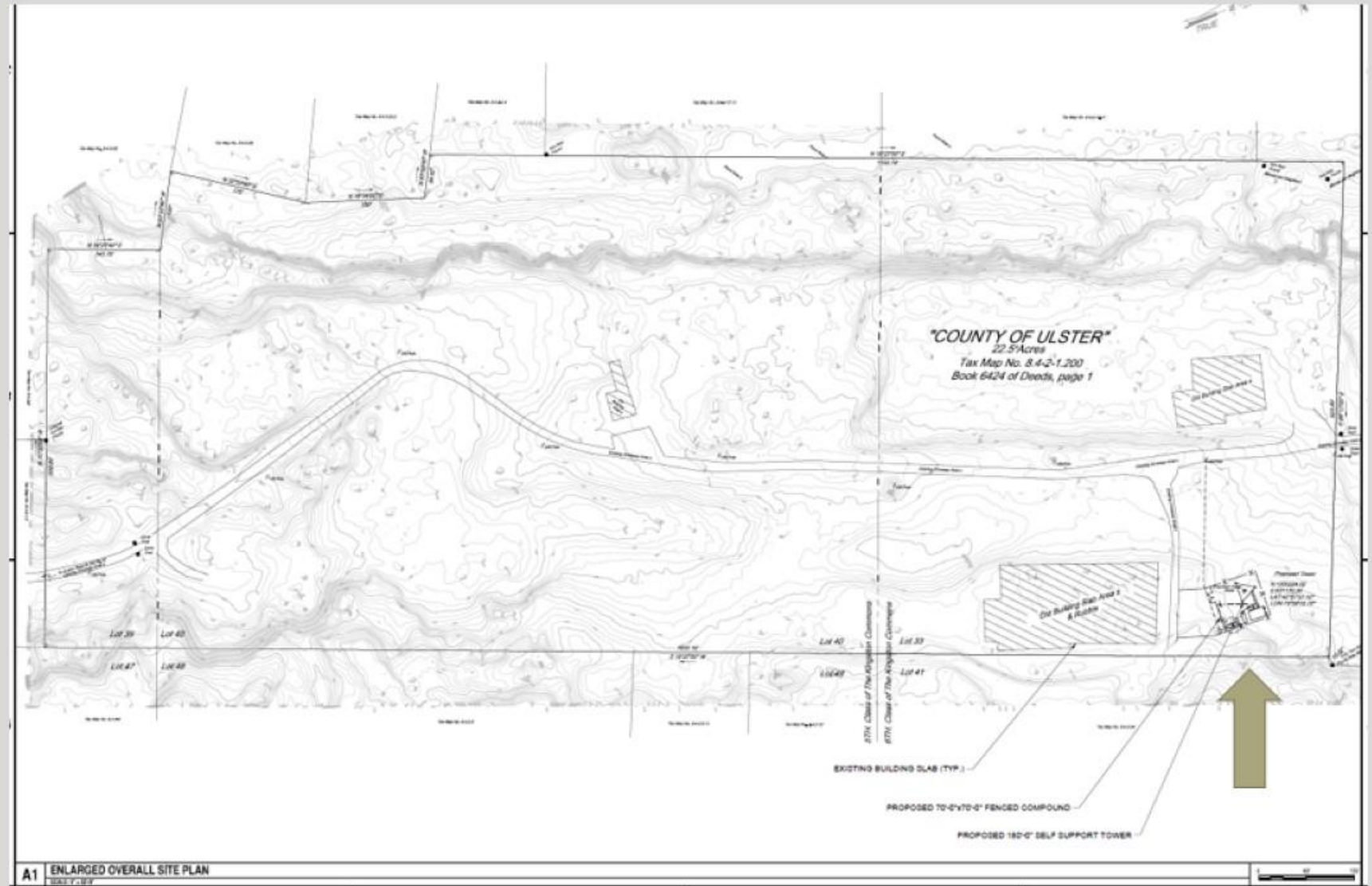
- No endangered species on-site
- No federal or state designated wetlands
- A SWPPP for disturbance over 1 ac will not be required



# DESIGN

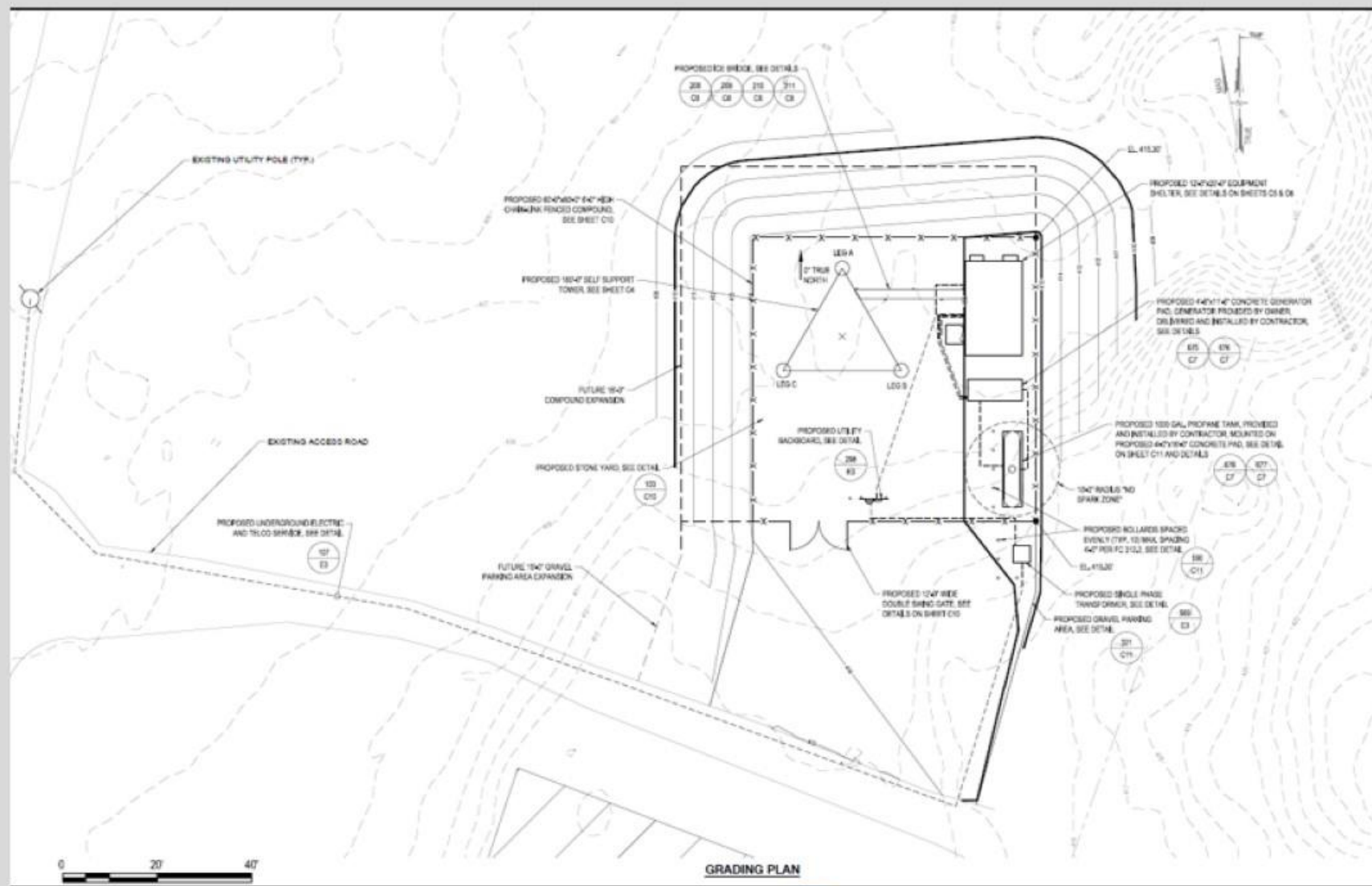
## Overall Site Plan

- ✓ Facility located in the northeast corner of the site on existing disturbed area
- ✓ Utilize existing access road
- ✓ Utilize existing electric poles into the site
- ✓ No clearing necessary
- ✓ Site disturbance less than 1 acre



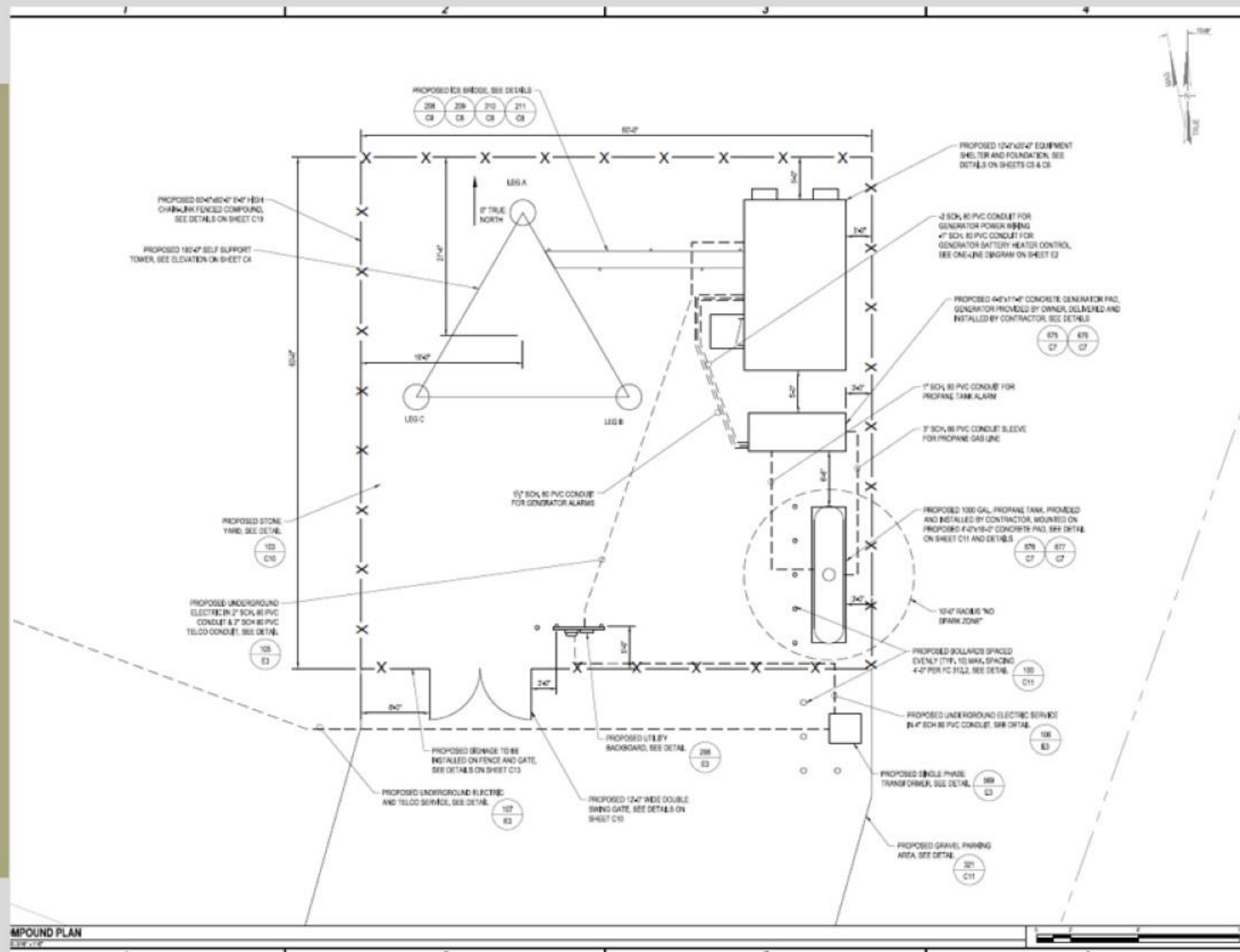
# DESIGN

- ✓ Site Grading Plan
  - < 1 acre of disturbed area



# DESIGN

- ✓ Enclosed Area Plan includes:
  - Tower
  - Equipment shelter
  - Generator
  - Propane tank



# County & Local Zoning

## Balance of Public Interest Test

1. The nature and scope of the instrumentality seeking immunity
2. The encroaching government's legislative grant of authority;
3. The kind of function or land use involved;
4. The effect local land use regulation would have upon the enterprise concerned;
5. Alternative locations for the facility in less restrictive zoning areas;
6. The impact upon legitimate local interests;
7. Alternative methods of providing the proposed improvement;
8. The extent of the public interest to be served by the improvements; and
9. Intergovernmental participation in the project development process and an opportunity to be heard.

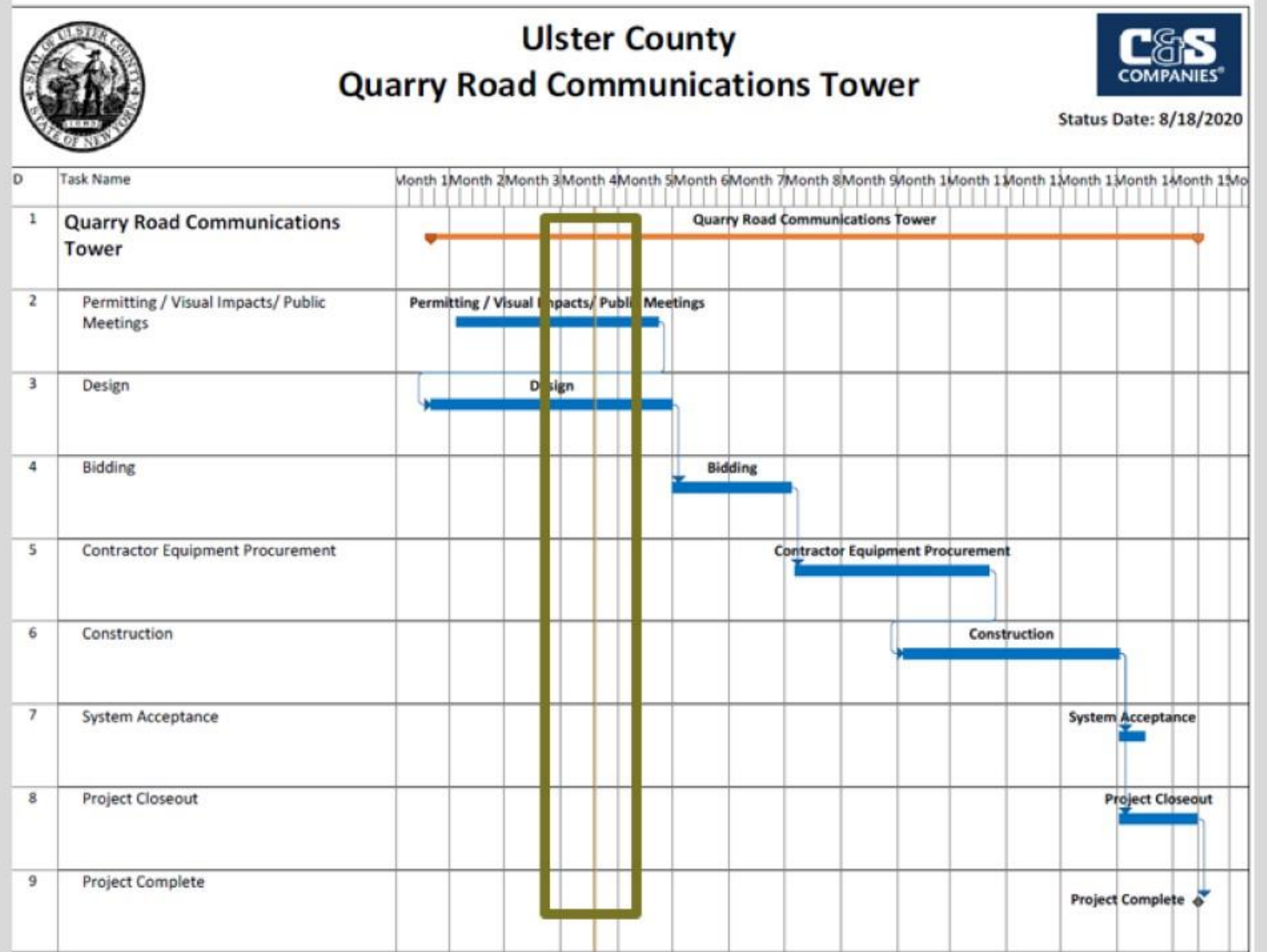
## BUILD

## Project Schedule

## December 2020: Complete Environmental and Design

Spring of 2021: Begin Construction

## Fall of 2121: Operational





# ULSTER COUNTY PUBLIC SAFETY RADIO TOWER

# Thank you

Project Web Page : <https://ulstercountyny.gov/pstower>

# Comments/Questions?

Submit Comments to:

Steven Peterson: [spet@co.ulster.ny.us](mailto:spet@co.ulster.ny.us)  
or

Dennis Doyle: [ddoy@co.ulster.ny.us](mailto:ddoy@co.ulster.ny.us)

By mail:

Ulster County Planning Department  
Box 1800  
Kingston NY 12402

To view Project Documents visit the  
Project Web Page : <https://ulstercountyny.gov/pstower>